

The Absence of Climate Change Mitigation

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Summary

This thesis utilizes theory on short-termism, market logic, sustainable development and intergenerational justice to perform a case study on international efforts to mitigate climate change. In doing so it finds that short-term interests form political and economical systems to subscribe to market logic and to discount future costs of climate change to the benefit of the present.

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1. Introduction

Earlier this month, an article signed by over 11000 scientists from over 153 countries, the *Worlds Scientists' Warning of a Climate Emergency*, was published. The article states that the world is in a state of emergency: Climate change is upon us, and it is accelerating faster than previously expected. Greenhouse Gas emissions from the combustion of fossil fuels are still going upwards, the two most important contributors of which are economic and population growth.

Especially worried are the researchers about the 'feedback effect', a potentially irreversible tipping point where the global warming driven by our emissions lead to the release of large stores of greenhouse gases underground. This would have catastrophic consequences to human life on earth, well beyond our control.

The warning calls for an immediate stop to fossil fuel extraction and the overexploitation of our ecosystem: “(E)conomic growth must be quickly curtailed to maintain the long-term sustainability of the biosphere” (Ripple et al. 2019).

If it feels like you have heard this before, it is because you probably have. Climate change as a result of human economic activity and particularly emissions tightly connected to our way of life has been a well documented and known fact for decades, yet we cannot seem to adapt our behavior accordingly in order to avoid this terrible fate. All information and research on global warming points towards dramatic emission reductions being the action required to stop the onset of global disaster, but the numbers point towards an increase in emissions, not reduction.

There is a huge dissonance between the conclusions that are made in climate research and the political decisions being made all over the world. Countless summits and conferences are held on the dangers and potential solutions to climate change, thousands of citizens, young and old, have taken to the streets to protest their governments failure to sufficiently commit to mitigation efforts. With so many reasons to change the way we develop to something corresponding with a decrease in emissions, we stay in the upwards trend. How can this be?

This thesis will utilize theories on *short-termism*, *sustainable development*, *intergenerational justice* and *institutions for future generations* to approach a case study on international efforts towards climate mitigation, namely international climate agreements, the Millenium Development Goals and the Sustainable Development Goals to identify sources to and mechanisms of the

apparent inaction on climate change mitigation.

1.1. Scope of the thesis and research question

This thesis aims to uncover causal mechanisms and relationships that contribute to the absence of sufficient climate change mitigation on the international level, mainly through the United Nations, as this is the place where most of these dealings and negotiations take place on this particular level of government. By viewing the challenge of global warming through a lens of individual behavioral tendencies, and how these tendencies form society as a whole, along with attempting to provide alternatives to these ways of prioritizing and analyzing in decision-making, the thesis will put its finger on what needs to be changed in the way we view development and progress to successfully find an effective solution to climate change.

In the discussion of emissions and climate change's implications to justice and rights, a good case can be made for international justice (see Baer 2011). The way emissions and the economic growth connected to it are spread across nations are extremely unproportional – a handful of nations emit more than all the other nations combined. The unproportionate element of this is not only in the goods provided by the activities fuelling the emissions, but also in the expected consequences from climate change: In many cases, the nations that have contributed least to these emission numbers are also the countries that are likely to be affected the most by negative effects of climate change such as drought, rising sea levels, extreme heat and weather, and so on. This thesis does not include this element of international justice however, as its focus is on the intergenerational aspect of climate change – the relationship between current and future generations.

The research question of this thesis is: *What keeps us from effectively committing to climate mitigation efforts? And: Could Institutions For Future Generations help mend this?*

By emitting greenhouse gases current generations are imposing costs on future human beings by exposing them to the potential harms and consequences of global warming, while enjoying the benefits in the present. This issue will be analyzed through different approaches to development and justice to further an understanding of the mechanisms at play on individual, organizational and institutional levels. To start us off, this thesis will now lay a foundation by presenting the literature on climate change.

2. Global Warming

Climate change was first theorized by John Tyndall in 1864, and in 1988 “Dr. James Hansen of NASA stood before the Senate Energy and Natural Resources Committee and stated that the 130 year global warming trend was definitely attributable to human activity” (Prasad 2017, 233-234).

That human activity has affected the average temperature on Earth is today a well documented fact. Climate scientists are continuously doing worrying findings concerning the predicted increased global average temperature: At this moment, we are at about a 1°C average above pre-industrial levels, increasing by approximately 0.2°C per decade. Temperatures are likely to reach a 1.5°C increase in global average over pre-industrial levels somewhere within the next three decades according to the United Nations (UN) Intergovernmental Panel on Climate Change (IPCC 2018).

Others estimate that if no action is taken, the amount of greenhouse gases (GHGs) in the atmosphere could double compared to pre-industrial levels “as early as 2035, virtually committing us to a global average temperature rise of over 2°C”, with a 50% chance to increase by 5°C in the longer run (Stern 2007).

The predicted consequences of climate change are both worrying and numerous, and as the temperature increases, so do the numbers and severity of these consequences. In the oceans, at a 1.5°C increase it is expected to see increased sea levels, temperature and acidity as well as decreased oxygen levels. Coral reefs are expected to decline by 70-90 percent. On land a 1.5°C increase in global average temperature is expected to cause extreme temperatures, weather and drought. Hot days are expected to increase in most places, although the highest temperature increases will occur in the tropics (IPCC 2018).

These predictions are but a few of the mentioned, and at an increase of 2°C or more above industrial levels, the consequences are expected to be higher in both severity of impact, and in numbers. The last time the earth was 2-3°C warmer than today, approximately 3 million years ago, sea levels were 25-35 meters higher than they are today. A particular concern is that of a so-called *feedback effect* where global warming from human activities cause a large release of GHGs stored under ground (Hansen et al. 2006).

This global event threatens biological diversity to a degree unlike any other events of our time. Granted, as human beings have evolved and taken land most everywhere on the planet, long ago is

the time where other life has been completely unaffected by our presence. However, the rate of which we are currently eradicating other life forms from existence is unmatched and rising. Thomas et al. (2004) predict that somewhere between 18-35% of species will be extinct in 2050 as the result of climate change and loss of habitat.

Man-made climate change is doing irreversible damage to life and ecosystems. The uncertainty concerns not if, but how much the climate will change. These changes are being accelerated by the human combustion of fossil fuels and resulting GHG emissions. If we were to stop emitting today, we would avoid a lot of issues that will otherwise severely hurt our economy, environment and general welfare.

The literature on climate change and its impacts is painfully clear: If we want to reduce the impact of climate change on ecosystems and quality of life – human welfare, radical changes to the way we live and develop is advised as soon as possible. We know how to do it: Reduce GHG-emissions to a point where they no longer contribute to global warming or even lower, and keep them there. This would be the sustainable way to emit (Wolf 2009, 370), and it would reduce the harm that is likely to be done to human beings and our environment in the near and far future. Yet any emission cuts resembling those that would be ideal for climate mitigation are not to be seen.

To put it differently, these quite ominous insights have not made us crave emission reductions just yet. Accompanied by the knowledge of the likely consequences of a business-as-usual scenario, the reactions, or rather lack thereof, seem unproportionate.

This thesis will argue that the lack of sufficient action when it comes to climate change mitigation is connected to the dominance of short-term interests among decision-makers on individual, national and international levels (Slawinski et al. 2017), as well as in between current and future generations.

2.1. Sustainable Development

In 1987 The Brundtland Commission urged the international community to start pulling the brakes on the endless push for economic development to avoid exhausting our natural resources, environment and ultimately, health. Among their concerns were the exhaustion of growable land and water sources, the destruction of forests, the combustion of fossil fuels causing global warming, and the depletion of the planet's ozone layer to name a few. In the report; *Our Common Future*, they note that although:

(I)nfant mortality is falling; human life expectancy is increasing; the proportion of the world's adults who can read and write climbing; the proportion of children starting school is rising; and global food production increases faster than the population grows (..) the same processes that have produced these gains have given rise to trends that the planet and its people cannot long bear.

(1987, 11-12)

The report stresses the internationality of the issue: Everyone will be affected, although some more than others, and to avoid doing irreparable damage, everyone needs to pull their weight in reforming the way we develop. Additionally, it underlines the interlinked and complex nature of the concerns:

We are not only depleting our resources and exhausting our environment, we are also experiencing amazing growth in many fields, such as in technology, medicine, economy and human welfare. However, much of this growth has been fuelled by the profits generated from the aforementioned finite resources in a sort of frenzy set to end whenever we run out.

The Brundtland Commission raises the issue on the excessive use of finite resources in our economical system: Although technological innovation can slow down the pace in which this is happening, the way we spend resources of which there are only a fixed quantity available to us, make it seem unlikely that our descendants will inhabit in a world where the same opportunities are present. Of course, such an inequality of opportunity already exist between those living in the developed parts of world and those in the developing parts today. The commission is clear when expressing their concern:

The pressure of demands on finite resources will destroy their ecological integrity over time. Future generations will be impoverished, and the people who suffer most will be those who live in poor countries that can least assert their own claims in a free-for-all.

(1987, 216)

“Our common future” brought the concept of sustainable development into politics (Greaker et al. 2013). As guidelines for policy and new ways to think about development and resource use, the ideas in this report has been used and expanded on ever since, and are the foundations for the

United Nations Sustainable Development Goals (UN SDGs). From the report, the definition most commonly used for sustainable development is “to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development 1987, 16).

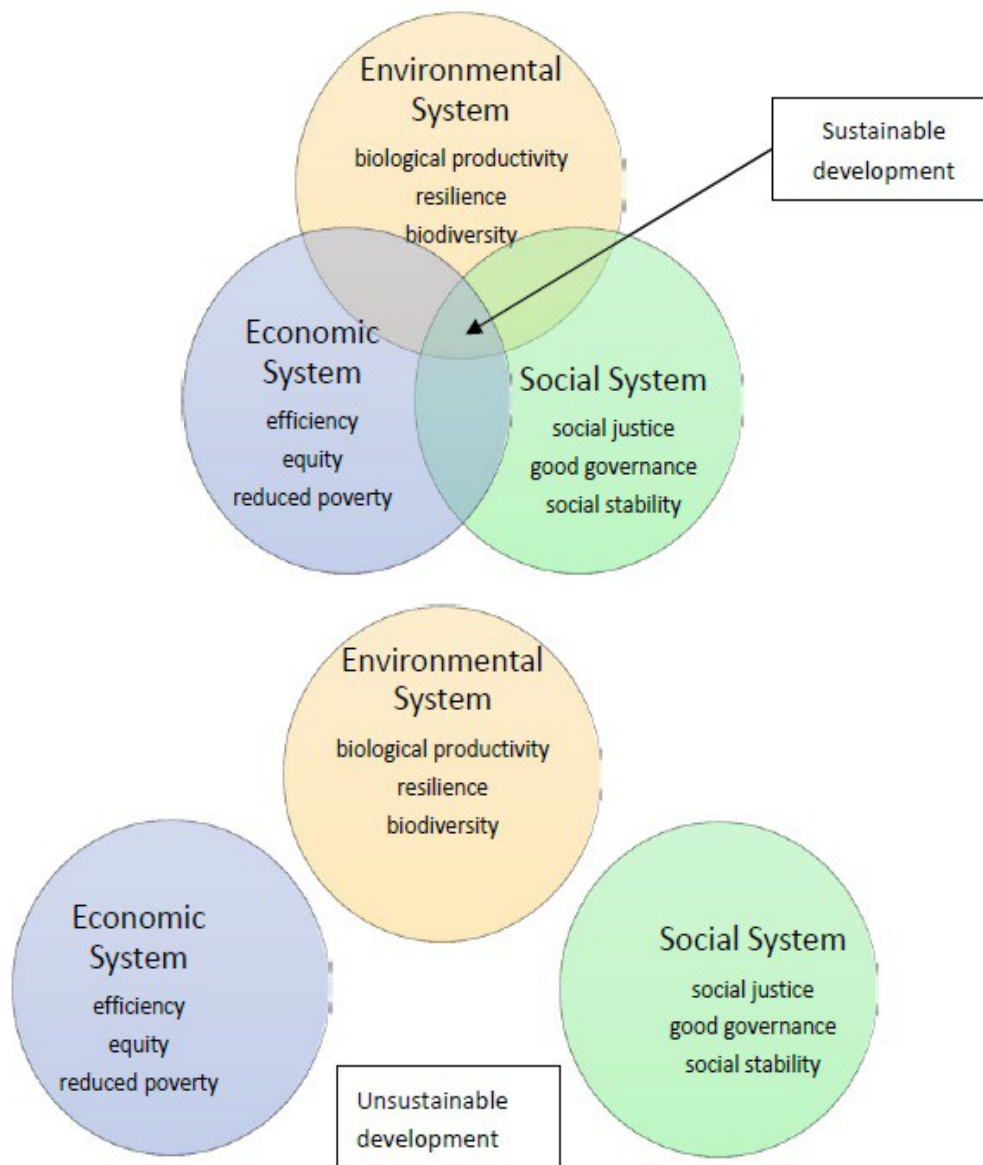
The report recognizes that our current modes of operation are not sustainable, and urges decision-makers globally to think of the 'big picture' development-wise, and to spread the resources more evenly both internationally and intergenerationally.

2.2. The systems approach to sustainable development

The *systems approach* can be quite useful to further understand the concept of sustainable development. It separates between the *economical*, *environmental* and *social* systems. Three distinctly different, but interconnected systems where development takes place simultaneously. Progress in one system can mean setbacks in another, this effect is known as a *trade-off*. The notion of trade-offs is useful to show how approaching the ideals of sustainable development require a deep understanding of processes, mechanisms and values within the three systems (Barbier & Burgess 2017).

This method of splitting development into a trifecta is used by several authors in dealing with sustainable development; for example as the “triple bottom line approach to human wellbeing”, identified as something almost all nations strive for: “(A) combination of economic development, environmental sustainability and social inclusion” (Sachs 2012, 2206), or as presented in this thesis, a systems approach to sustainable development (Barbier & Burgess 2017).

Each system has “its own sets of human-ascribed goals”; biological productivity, resilience and biodiversity are presented as examples of the environmental system goals while efficiency, equity and reduced poverty are economical development goals. In the social system good governance, social justice and social stability are goals (2017, 4). The systems and their goals are represented in a Venn diagram to graphically show how this approach furthers a coherent understanding of sustainable development:



Source: Barbier & Burgess (2017). Figure 1. Page 4.

The approach is useful because it underlines the presence of trade-offs between the economic, environmental and social systems in development, and the importance of paying attention to the trade-offs when attempting to promote or achieve sustainable development.

An important insight is that fully maximizing goals in one or two systems can be unsustainable; sustainable development happens when the three systems overlap. This implies a need for restraint, compromise and overview when chasing one particular goal in respect to achieving sustainable

development. For example, pursuing economic efficiency can promote growth and, if done sustainably, can reduce poverty and increase social stability. However, maximizing economic efficiency is likely to put costs on biodiversity, equity and social justice, and hence to be unsustainable. Sustainable development happens in the middle ground.

The goal of this method, and of sustainable development, is to maximize the *net human welfare gain*. We do this by asking ourselves: “(I)f we decide to prioritize improvements towards one goal or set of goals, and there are consequences for achieving another goal, is there likely to be a net gain in welfare from this choice?” (2017, 6).

The systems approach to sustainable development conceptualizes sustainable development while underlining the importance of compromise, restraint and overview when assessing and balancing the trade-offs taking place in the push towards a certain goal or set of goals within the systems. The ultimate goal of this mode of operation being a sustainable net gain in welfare.

The worries of the Brundtland commission in 1987 were many and interconnected. Among their main concerns was the aggressive way in which economic growth is pursued and treated as a 'good' in itself, seemingly ignoring or discounting costs this mode of operations has on other systems. *Our Common Future* rang the alarm bells internationally on patterns of an economic activity that they deemed unsustainable – incapable of being supported or upheld in the long run. Additionally the report provided a conceptual framework for an alternative to this short-sighted behavior – an alternative 'good' - sustainable development.

Acknowledging that development in one system might directly or indirectly cause degeneration in another if it is carried out carelessly is not a new idea – this is by no means the first time someone has concluded that economic activity such as resource extraction has degrading effects on the surrounding environment. The commission however provided a framework thoroughly describing the scope and interconnectedness of the issues and the activities causing them, along with a set of values that could be set up alongside economic development.

The message in its essence, was one of constraint: Although we are developing and comparatively doing great by certain measures, the way we develop does not sufficiently consider the long term, and is very likely to limit the ability of future generations to provide for themselves. These concerns were spread three decades ago, before events such as the fall of the Berlin Wall or the chinese

transformation into an economical superpower.

What is keeping civilization from acting in accord with this knowledge and taking definitive measures to secure environmental stability in the present as well as the future? Why are the nations of the world not joining together in a significant emission reduction when we can be certain that this lack of action will have serious consequences sooner or later? This is the research question of this thesis. To find possible explanations to this behavior, we will now move on to literature that deals with human preferences concerning cost and benefits with the added dimension of time.

2.3. Short-termism

When weighing short-term and long-term interests against each other, it often makes sense for an individual to prioritize the present or the near future. For the average person a decade is slightly above a seventh of its lifetime, and although it is in human nature to plan ahead to some degree, the scope of time that is planned for in everyday planning and decision-making is likely not that huge. In fact, a lot of research that has been done on individuals' preferences and time perspectives, and their tendency to favor the short term in particular.

Short-termism - “the priority given to present net benefits at the cost of future ones” (González-Ricoy & Gosseries 2016, 4) is understood by most strictly as a question of cost and benefits in time, and the tendency of actors to focus on the present. This can be a challenge in democracies when trying to pass legislation that require a great deal of investment in the short term while the benefits may take years to reveal themselves, such as in education or health care reform.

Studies on individuals and time-perspectives have shown that individuals tend to prefer the short term at the expense of the long term, and that this preference has an impact on decision-making and expectations. There is a logic to this; what is far away in time does not seem as urgent as the present. In addition to, and likely because of this, people with a short-term preference have also been found to have a lack of pro-social and pro-environmental behavior (Slawinski et al. 2017, 260).

Simply put, short-termism is the tendency to discount the future in favor of the short term. There are many reasons for this favorization: Some people just prefer benefits in the present even if they are worth more than future ones, but even when individuals are willing to wait for a more valuable benefit, they still tend to discount its value. An explanation for this is the uncertain nature

of the future; attempts at predicting it turn out wrong all the time - just compare weather reports to the actual weather - so individuals prefer to safeguard by claiming the benefits in the present instead of exposing it to the uncertainty of the future. Short-termism and a low tolerance for uncertainty reinforce each other: If something is set in the future, it is by nature more uncertain than something in the present (MacKenzie 2016, 25; Slawinski et al. 2017, 260-262).

While short-termism is often seen as a consequence of a delay in the expected impact of decisions, uncertainty avoidance instead stresses the lack of information about the likelihood that expected impacts will materialize.

(Slawinski et al. 2017, 258)

This tendency of preferring the present has been identified in many parts of society, including in our economical and the political systems. One can also argue that not only are the tendencies towards short-termism of individual origin, but that we as short-term individuals have institutionalized our short-termism. When evaluating different types of short-termism, it is useful to ask oneself *what* is being discounted and *why*. This can help with determining different kinds of, and sources to short-termism (González-Ricoy & Gosseries 2016, 5).

As stated, short-termism affect many parts of society, and on several levels. In a democratic election votes cast by short-term-focused individuals are likely to be in favor of their interests, and politicians seeking office might feel tempted to appeal to these interests to get their votes. It is not necessarily that the voters are always opposed to paying near-term costs for long-term benefits, an uncertainty around the outcome of a policy can also be what triggers a preference for choices closer to the present (MacKenzie 2016).

Policy choices that require a longer time until results become visible, such as the aforementioned education or health care reform might be welcome to the voters depending on their trust that the government will spend the money wisely, but elements of uncertainty, such as a future government canceling the promises of their predecessors, natural disasters or other crisis, may incentivise short-termism in voters and thus policymaking (2016).

In addition to voters and politicians, a third source to short-termism in political systems can be special interest groups: Wealthy and influential people can hold short-term interests and use their power to “win concessions that distribute long-term costs to others and confer benefits on

themselves” (2016, 28). Actors with this kind of influence can use their powers to oppose or support certain policies or politicians, and in other ways exert their influence to push policy changes in their preferred direction.

A fourth source to short-termism is argued to be the the absence of future generations. They are not here to fight for, or even formulate their interests (2016). We can however make plausible assumptions about their interests: In the literature on future interests and intergenerational justice, “(t)he famous Lockean proviso that no one could acquire resources out of the commons except if there were as much and as good for others” (Sagoff 2011, 6) is sometimes brought up as a guideline on what is justifiable concerning private land ownage and the acquisition and spending of natural resources. This does posit a limit on resource use so that others can have 'their share', but it does not mention future generations explicitly (Howarth 2011, 9).

Using knowledge gained from research and philosophy we can make some reasonable assumptions about the interests of future generations. Sometimes only logic is needed: There is for example no doubt we in the next hundred years still will need food, clean water and shelter, as this is something we all depend on to survive.

Given that historical knowledge is available to them, it is likely that future generations would have an interest in being as well-off as, or more well off than we are today. This is not surprising considering that people are likely to prefer the short term in the future too, but it is worrying when we recognize that the current mode of growth is unsustainable in the long term.

So far I have argued that people tend to favor the short term in part due to a preference for the present, but also due to a low tolerance for uncertainty. We also tend to discount future costs – we underestimate costs set to be put later on, especially if the benefits can be enjoyed right away. As I will argue further on in this thesis, these tendencies, perhaps particularly the discounting of future costs, are contributing factors to why we so determinedly feel free to impose the costs of climate change on the people that will come after us.

At this moment it is likely that our failure to sufficiently commit to efficient emission reduction will cause harm to human beings in the future. Simon Caney show how global warming will threaten at least three “fundamental interests”: One, a global temperature increase will increase the number of starving people by millions. Two, it will disrupt peoples ability to take care of themselves, with

climbing sea levels, natural disasters, failing crops due to drought or heavy rainfalls, and so on. And third, climate change threaten the fundamental interests of health, with increased risk of airborne and waterborne diseases, extreme weather phenomena, heat stress and poor air quality, proving that not only are we currently imposing the costs of climate change on future generations, but our failure to act is also going to cause harm to them (Caney 2008, 538). Interestingly, human beings have a tendency to find it worse to have caused harm by action than to have caused it by inaction (Slawinski et al. 2017, 256).

I have now argued that there are tendencies in human behavior and decision-making that favor present over future time, and mechanisms in society that incentivise this tendency to short-termism. I have then showed how this discounting of the future is leading us to cause harm to people that inherit us, through unsustainable use of finite resources and the contribution to climate change through GHG emissions. Some scholars appropriately name this *harmful* short-termism (Caney 2016, 138).

Identifying different types of and sources to short-termism in actors, organizations and institutions is helpful to determine and evaluate solutions to limiting the influence and ability of short-term interests that is likely to cause harm to others both in the present and in the future. In the case of the future generations we are currently discounting the well-being of for our own comforts, and we are getting away with it because they are not here to defend themselves.

Now that the term short-termism has been introduced along with a notion of how our decisions and prioritizations are affected by a favorization of the present and a low tolerance of the uncertainty of the future, this thesis will move on.

To further explain what contributes to the absence of effective climate mitigation efforts, the next part of this thesis will provide an insight into the the economics of climate change, as well as how ideals in economic thought affect preferred and pushed-for policies on organizational and institutional levels.

2.4. Economy, markets and climate change

Fossil fuels are essential for economic growth in all modern economies as the primary and cheapest source of energy. They are a bundle of finite resources that have allowed for spectacular economic growth. The developed world has been enjoying this fossil-fuelled growth decades, while

developing nations and recently opened economies have had a bit of a shorter run. The combination of open market economies and fossil-fuelled development has provided increased living standards and welfare for many, and more are standing in line to get their piece (Baer 2011, 3; Young 2016, 130).

GHG-emissions are tightly connected to economic activity, it is therefore necessary to understand how climate change and mitigation is seen in a market approach, and how this in turn affects mitigation efforts.

Climate change policy is fragile. Because the costs are high in the present while the benefits are not expected in decades or centuries, laws on the regulations of climate are particularly susceptible to short-term interests (González-Ricoy & Gosseries 2016, 4). Actors invested in the short-term will prevent to prevent or undo the policy (Lazarus 2009), and as Mark Sagoff notes, “what would lead us to think that when prices rise politicians will stand up to populist majorities who want cheap energy?” (Sagoff 2011, 9). Politicians are also economic actors and must be treated as such.

A common criticism of economic activity is the focus on profit, an increase in net monetary value seen as the objective 'good', and an unwillingness to accept other value measures, such as individual utility gain from welfare increases or say, biological diversity. Or, through the context of the systems approach to sustainable development: Economic actors are often criticised for not sufficiently accounting for, or even disregarding costs and benefits outside of the economic system when making decisions and evaluating trade-offs.

Ideals of a market economy as free from state regulations as possible has become powerful in the latest decades as opposed to the period following the second world war, Nicholas Stern argues. He states how economists tend to see the market as a system that is not infallible, but more so than the government, and notes that in this thought, good policy towards industry is to stay away and deregulate if anything, “the less regulation the better” (Stern 2009, 12). This, he argues, has become a sort of mantra, an objective truth to many in regards to the role of governments in markets.

Such a mantra is limiting when the dealings in the market cause harm to 'third parties', the people outside of the trade, such as in the case of GHG-emissions and climate change. Climate change is by many deemed the ultimate 'externality' - “any cost to any party not directly involved in a decision or activity that affects him or her” (Sagoff 2011, 4; Stern 2009, 29). In this view global

warming is a 'market failure' - what happens when the normal dealings of the market fail to deliver the optimal outcome.

Despite the evidence on climate change and its volume and availability, current emission trends are not hinting that they will turn around any time soon. Faith in the free market and individual, rational actors with full information acting in self-interest will not save future generations from climate change-induced harm. In a perfect system, the actor realizing the harm being done as a result from the externality would see this as reducing her own utility and self-regulate accordingly (Stern 2009, 36).

A connection between the mechanisms causing this 'externality' and short-termism can be made: Economists have had a tendency to predict way too low costs from climate change damage in the future, discounting future costs of present benefits. Stern shows how some have calculated a loss of less than 5% of GDP associated with a global temperature increase in 5°C above pre-industrial levels (2009, 32). In the case of international climate mitigation coalition efforts, the discounting for damage costs over time affect the nations incentives to enter such coalitions (Boestti et al. 2013).

Because we favor the present and discount the future, the distance in time from the expected consequence affect our evaluation of the trade-off: The future benefits of mitigation are deemed too small to justify the short-term costs (Howarth 2011, 3; Lazarus 2009, 1157; Slawinski et al. 2017, 260). The temporal distance to, and absence of future generations is in this way a significant source of their shortcomings in successfully having their interests represented.

People in the future do not exist yet, so they cannot be bargained with. They cannot hold any interests. And even if we accept that people in the future hold interests, they are not alive at the same time as us, and in fact have interests that conflict with ours: If we assume that future generations would like us to stop emitting so that they can enjoy benefits similar to ours, we would have to restrict ourselves to oblige them, and the benefits might not become apparent before after we ourselves, are dead. This argument is used to argue that global warming is not a collective action dilemma; “no relevant 'common interests' exist” (Sagoff 2011, 3)

Slawinski et al. Argue that by *market logic*, climate mitigation should not happen at the expense of economic growth, because this logic “prizes growth in share prize, wealth accumulation, keen competition, and committing investment capital” (Miller, Le Breton-Miller, & Lester 2011 in

Slawinski et al. 2017, 264).

Further on they argue that “(t)he dominance of the market logic in the global economy has contributed to an institutional environment that encourages organizational inaction in various ways” (2017, 264): Because climate change is connected to a fossil-fuelled economy, proponents of drastic action would support emission reductions, and emission reductions are seen as threatening to economical growth. By market logic, shareholder price should at least to some degree reflect the need for emission reductions. However:

Only when investors have a strong belief in the potential of low-carbon investments to be a main driver of economic growth will organizational measures to reduce GHG emissions translate into a higher share price.

(Slawinski et al. 2017, 264)

This shows how a low tolerance for uncertainty incentivise short-termism on the organizational level. Because there is a high uncertainty about the profitability in investments towards mitigation, investors are likely to focus on other, more certainly profitable ones. And because the organization needs investors, this creates an incentive to focus on the practice that keeps the share price up.

The market logic is also said to affect failure to efficiently mitigate global warming because it “forms the main regulatory institution to curb GHG emissions – the carbon market – that leads climate policy to be ingrained with a short-term focus” (2017, 264-265). Furthermore, an uncertainty concerning future regulations incentivises business to withhold investments.

In The Stern Review, Nicholas Stern estimates that a business-as-usual scenario in regards to climate change would impose an overall reduction of around 5-20% of global GDP, each year. At the same time, the expected costs of climate change mitigation would cost an equivalent of around 1% of GDP each year (Stern 2007). These costs would mostly be due in the next century, underlining the intergenerational nature of the issue and the need for a new approach to considering costs and benefits in the temporal dimension in regards to climate change.

It seems that there are many obstructions to effective climate mitigation in the way the market is run, and in the logic that drives market actors. Of particular concern in the case of climate change, is perhaps the aversion towards government regulations on the market. A low-regulation market

does not currently value climate mitigation or low emissions enough for it to be an effective mitigation tool, in fact, economic activity seem to undermine mitigation.

The call for effective institutional action on climate change mitigation is loud and clear in the relevant literature. “economic theory cannot provide a useful way (..) to think about climate change”, states Mark Sagoff (2011, 10), calling for a carbon tax. “Current regulations are weak, unreliable, and short-term oriented, and therefore have not led to marked improvements among firms in terms of absolute GHG emission reductions”, state Slawinski et al. (2017, 275). Climate change is a global problem, Richard J. Lazarus points out, “(b)ut there is an absence of any global lawmaking institution that match the scope of the problem” (2009, 1161). The future of the planet depends on us creating an agreement that is effective, efficient and equitable, “(t)here is no time for many repeats on a bargaining game”, states Nicholas Stern (2009, 43).

2.5. Intergenerational justice

It is suggested in the literature on intergenerational justice that to take the interests of future generations seriously, an ethical view of the matter of climate change and mitigation will go further than the economical thought and view (Sagoff 2011, 12). Therefore this part of the thesis will take a closer look at some ethical and moral takes on the relationship between current and future generations, in the context of global warming. Here we ask ourselves: Should the interests of future generations be considered when we evaluate and create certain policies?

When discussing rights and interests of future generations, one immediately enters the realms of the normative, ethical and abstract. As touched on earlier in this thesis, future generations do not exist, they do not bargain or formulate interests. Another consequence of their non-existence is that they cannot protest any decisions we make in the present that might be against their best interests. This, in addition to the favorization of the short-term in humans, would be argued by some to be good reasons for the institutionalization of protecting future generations from the interests of their ancestors (MacKenzie 2016).

For example, the burning of fossil fuels have provided us with many goods, comforts and services that it might seem impossible to live without. Imagining oneself in a world without the freedom to conveniently utilize personal airplane travel or cars at will, for example, likely demoralizes many in this day and age from supporting a full stop in GHG emissions. This individual unwillingness to trade comfort for the benefit of future generations plays an important role in the big picture. Even

though we know that this choice is likely to harm people in the future, this does not seem to decrease the demand for emissions. This part of the thesis will explore the literature on future interests and intergenerational justice to see if we can make any assertions about the *rights* of future generations.

It has in this thesis already been thoroughly argued that the currently living generations are imposing costs on future generations while reaping the benefits in the present. Further on it has been proposed that the mechanics behind this is a tendency to prefer the near-term to the long term, along with a low tolerance for uncertainty. The future, as has been argued, has an innate shroud of uncertainty connected to it, and the more time there is between us and whatever we are evaluating, the more uncertain the accuracy of our predictions become. This leads us to believe that the more temporally distant an event is, the less we tolerate the uncertainty that surrounds it.

As there is an element of uncertainty concerning the future, the same uncertainty affects future generations. We do not know who they are or what their interests will be focused on. Truly, we cannot with certainty even conclude that they will be born – what if some catastrophic event were to wipe all human life off the planet? If this was the case, certainly we would be justified in spending all the resources available to us without concern (González-Ricoy & Gosseries 2016, 5).

Building further on the dimensions of uncertainty, how are we to know that the resources we potentially save up for the future will be put to good use? As an example; if we decide to save resources for future generations to use their fair share of, how can we be sure that they won't spend it all, leaving nothing to their successors, or that they won't decide to use said resources to promote a racist dictatorship agenda? Some would argue that in the latter case, we would be justified in spending all the resources on ourselves (Heyd 2009, 183).

A central sentiment to the issue at hand is the defenselessness of future generations to the whims and wants of their ancestors:

Future generations could no more assert property rights against us than we might assert them against those who preceded us. Future generations are not agents in a relevant sense; it is unclear how they can exercise rights (...). The property rights they may possess will govern their relations only with each other not with us.
(Sagoff 2011, 10-11)

Whether or not this is something that should be mended by attempting to restrict the ability of the present to impose costs on the future for their own benefits, is something that would have to be argued further however. Let us turn the situation upside down for the sake of argument: What if we were given access to information that proved that an event would happen in the future that made future generations much more wealthy than we are today? In this instance a good case could be made for us spending an unproportionate amount of resources today and leaving less for the future than what would otherwise be justified, given the certainty of the information.

On the discussion of what future generations are entitled to, or what we are obligated to leave behind for them, there are many schools of thought. Some argue that society is intergenerational – older generations pass on their properties and responsibilities on to younger generations, and several generations coexist at all times. Individuals see themselves as belonging to a certain history and tradition, and this affects their decisions - “They preserve their heritage and pass it on to future generations” (Thompson 2009, 25). We also have *lifetime-transcending interests*, such as a grandparents' wish for their grandchildren to do well in life, or that their property be properly distributed after their death. The successors *could* disregard their final wishes, but doing so would not only disrespect them and their memory, but also the act of honoring wishes post-mortem itself, and in this increasing the chances that *our* wishes would not be granted when we are dead (2009). In this thought, because society is intergenerational there is a chain of obligation between present policymakers and not yet born children of future generations (Howarth 2011).

Someone who subscribes to a *presentist* moral framework would perhaps argue that we are only obligated to leave behind the bare minimum to ensure that people in the future have lives minimally worth living; future individuals' identities are shaped by the actions of the present, so they would be happy *they* were born. *Utilitarians* would likely first ask themselves which decision gives the most net utility gain regardless of position in time and then make their decision, while others apply *rights-based ethics* to answer the question and, perhaps, suggest that at a bare minimum, future generations should have the right to be protected against bodily harm (2011).

These different takes on intergenerational obligation have varied conclusions in regards to the current generations responsibility in regards to climate change, but of the ones presented in this thesis, all agree that current generations should provide future generations with a certain minimum of welfare, although they disagree on what and why. A presentist would perhaps argue that as long

as future individuals are born and have lives minimally worth living, they would be happy to be born. Following this, we should do what we want to as long as we know that the world will still exist despite of our actions. Furthermore, the presentist would maybe argue that life quality has and wealth has been increasing for quite a while now, and that this trend is likely to continue in the future.

A supporter of the chain of obligation formed by lifetime-transcending interests would perhaps argue that we owe it to our successors to give them the best inheritance that we can, as our ancestors have done for us. Such a view would likely argue for some climate mitigation to ensure that the future has opportunities equal to ours. This is similar to the utilitarian take; utilitarians might say that the welfare cost from climate change in the future will be greater than the cost of mitigation today and therefore recommend great emission reductions, despite the utility gains that could be had by less well-off people in developing countries today by emitting. Supporters of rights-based ethics would first ask which rights people in the future should have and make their decision. If the rights-based ethicist agrees with the bare minimum of a right to protection from bodily harm, she would perhaps also argue for significant emission reductions to ensure that our present actions do not cause harm to future human beings (2011).

When considering the effects of climate change on the welfare of future generations, choosing a rights-and-justice-based approach generally leads us to a conclusion that the current emission rates should be cut down to an acceptable level where we no longer degrade the environment. Even in the presentist approach to intergenerational justice there is a, albeit minimal recognition that we should leave behind the basic necessities of a life minimally worth living, while other approaches have far more excessive implications. Because there is good reason to believe that business as usual will lead to a significant reduction in net welfare in the future, present generations should immediately go into an 'austerity phase' where we reduce emissions dramatically to let the atmosphere and environment recuperate before we enter and stay within a 'sustainable stage' (Wolf 2009, 371).

2.6. Institutions for future generations

Because people tend to favor the short term while discounting future costs and benefits, we are liable to sometimes make decisions that would likely go against the interests of future generations. Institutions For Future Generations (IFFGs) – to be understood in this thesis as 'institutions that seek to protect future generations from the harmful short-term interests of the present', is a set of institutions designed to act as a check on short-termism, to represent and act on behalf of future

interests in the present, or both. A useful distinction here is that between the *future-focused* and *future-beneficial* institutions: Future-beneficial institutions carry out measures that are justifiable on other grounds, but beneficial to the long term. Future-focused institutions on the other hand, exist for the benefit of and focus on the long term.

Although most literature on the subject encountered by this author – intergenerational justice and IFFGs - are relatively new and inspired triggered by the thus far failing attempts at cutting GHG emissions and climate change mitigation, the concept is arguably not unfamiliar neither in politics nor institutional design. This thesis has already argued that there are several well-documented sources to, and mechanisms that incentivise short-term behavior and interests in voters, politicians, institutions, organizations, market actors and special interest groups. The multitude of sources to short-termism, argue IFFG-enthusiasts, require a multitude of institutional responses to sufficiently counteract.

Some are concerned about the amount of political power concentrated in the hands of older generations. Older generations tend to have a higher political influence: “(T)hey control more political resources, vote in higher proportions, and hold more political offices than younger generations” (MacKenzie 2016, 28). Old generations are also suspected to have more dominant short-term interests than younger generations, because they are not as likely to pay the long-term costs to short-term decisions. There is some evidence that supports that old people discount the future more than middle-aged people, but they are also shown to be willing to pay short-term costs for long-term policies they might not be able to enjoy. Also, people of different age groups seem to have similar political interests on topics that are likely to affect them differently, such as medical care, education and pension policy (2016, 29).

A suggestion to this source of short-termism is *youth quotas* in parliament – essentially the reserving of a certain percentage of seats in parliament for younger generations. This approach, it is argued, would likely not do much to combat short-termism, as the young politicians would be just as exposed to the short-term mechanisms and incentives as the older generations are. What this *would* mend however, would be the over-representation of older generations in politics (2016, 30).

Another suggestion to an institutional arrangement in favor of future generations are to reserve seats for representatives of future generations in institutions such as in parliament. In this model the future representatives have the same power as 'normal' representatives, and some 5-10% of the

parliament seats are reserved for such representatives. These representatives should be elected in the same way normal representatives are, and have the same powers as them. Voters get two votes in this model: One for a present-representative (P-representative), and one for a future-representative (F-representative). In this model, a set of political tools should be available to the legislators: The power of a third of the legislators to delay law proposals until the following election, to promote discussion about the proposal they disagree with, and to suggest referendums. The idea here is to make it easier for parliamentary minorities to delay policy for a while to oppose it when deemed necessary (Ekeli 2005; Ekeli 2016).

Problems with this model are that future generations are not present to authorize the F-representatives to act on their behalf, as well as: How will the F-representatives know what future interests will be like? And also: The mechanisms and sources to short-termism will still be present, and we – and the future generations – will have to simply *trust* that the F-representatives are acting in correspondance with presumed future interests. As a fix to the last issue, it is suggested that environmentalists act as accountable proxies to the F-representatives, that will punish them during elections if the representatives do not act within what the environmentalists believe future interests to be (2016, 217).

Another proposed IFFG concern pension funds. Pension funds invest and manage other people's money – the money of current and future generations. Those who manage this money, it is argued, have some obligation towards those whose money they are managing, called *fidiciary duties*. Further it is argued that these duties are traditionally interpreted as a duty to maximize the short-term returns on capital, and that this hinders the managers of the funds from investing more in more sustainable alternatives – through social or environmental aspects. By reinterpreting and redefining fidiciary duty towards the beneficiaries – the people whose money they are managing. In this model, governments put certain environmental and social obligations on pension funds that will, *sometimes*, trump the funds' fidiciary duties – maximizing short-term returns, towards the beneficiaries (Sandberg 2016).

The last IFFG that will be presented in this chapter is an *ombudsman for future generations*. An ombudsman does not have many formal powers, his decisions or resolutions are not binding, and are comprised of condemnations or recommendations. The ombudsman can not force actors to do anything, and is reliant on suggestion and convincing to promote his desired policy. The ombudsmans role is to ensure that other actors act in accord with laws and regulation, through

visits, inspections and insight into information from other state entities. He can promote, recommend and request policy choices, but the final decision lies in the hands of the legislators (Beckman & Ugglä 2016).

It is argued that because the ombudsman does not have any formal powers to modify the democratic process, he does not face the same issues of legitimacy that say, an F-representative would. Additionally, because legislatures and governments are likely to oppose any restrictions on their power to govern, an ombudsman is also argued to be a more feasible solution to representation of future generations because it would be easier to institutionalize. Although not in every case, previous cases of ombudsmen have shown them to be quite successful and credible as a representative of the people. To make up for the ombudsman's lack of enforceive power, it is suggested that his mandate and jurisdiction is broad and non-restrictive. This will incentivise him to take in all dimensions of future interests instead of focusing on single systems such as the environment. The ombudsman should be able to be versatile and politically competent in order to sufficiently represent future interests, hence the need for a broad mandate (2016).

The case for the ombudsman is strong based on expected feasibility, legitimacy and efficiency, although it is also recognized that the limits to the institutions power is both the source to these strength as well as its biggest weakness. The reason the ombudsman is more likely to be accepted by those in power is because he is not seen as a big limitation to their autonomy. However, ombudsmen have proved to be quite capable and able to make a difference in the past, and therefore and ombudsman for future generations could be a good addition to a polity that seeks to limit the influence of short-termism (2016, 131).

3. Methodology

To answer the research question this thesis utilizes a qualitative case study of international efforts toward climate mitigation. The cases and methods have been chosen because of a wish to map out which mechanisms are causing climate change mitigation to fail and how, in hopes of ending up with a new hypothesis on policy approach to the issue.

Case studies are “the detailed examination of an aspect of a historical episode to develop or test historical explanations that may be generalizable to other events” (George & Bennett 2005, 5), and are generally strong where statistical methods are weak. Some of the strengths of case studies are:

(T)heir potential for achieving high conceptual validity; their strong procedures for fostering new hypotheses; their value as a useful means to closely examine the hypothesized role of causal mechanisms in the context of individual cases; and their capacity for addressing causal complexity.
(2005, 19)

Case studies is a good method when one wants to find out *what* happened and *why*. The aim of this study is to find evidence of a hypothesized causal mechanism, namely short-termism and market logics negative effects on climate mitigation. Cases have therefore been chosen that on the multinational level attempt to mitigate climate change, and which are deemed to have been ineffective in their endeavour. Following Moses & Knutsens this approach is that of a *fitting* or *theory-confirming case studies*, a method that is used to “investigate the degree to which a given case fits a general proposition” (Moses & Knutsen 2012, 137).

Case studies allow us to pay attention to causal mechanisms and to test and perhaps find support for our general arguments. Case studies are criticised for their low N: Two-three cases are not a solid basis for generalization. They can however be quite useful to map out causal relationships and test theories and hypotheses, and are likely to create new ones in the process.

The thesis has primarily gathered its sources from academic books and articles, official organization websites and news articles. To ensure a reliability and an inner validity – that valid conclusions can be made when the study is done, triangulation of sources has been done where possible (2012, 132).

The study attempts to find sources to and reasons for the apparent lack of appropriate response to the threat of climate change in public policy, and does so by focusing on the concept of short-termism and market logics effects on individual, organizational and institutional levels.

In this thesis, case choice have been focused on finding cases where the relationship is expected to hold, that is, *fitting* cases (2012, 140). This is done to test the theory on cases that are relevant to the issue. I have chosen cases of attempts to effectively mitigate climate change, and my hypothesis is that in these cases, short-termism and market logic have affected the outcome towards inaction.

Because it is argued by many that the problem of climate change is global both in who is responsible and who will be affected (Lazarus 2009; Sachs 2012; Stern 2009), this thesis focuses on

international efforts on climate mitigation in its case selection. International agreements are said to be the “gold standard” (Sachs 2012, 2210) in international legislative process and a truly successful international agreement on climate mitigation is very likely to be effective in mitigating climate change, therefore such agreements have been chosen as subject to this thesis.

The other two cases, the Millenium and Sustainable Development Goals, are UN's attempt at a global framework for sustainable development, and the Sustainable Development Goals are drafted by a plethora of actors and agreed to by all UN member nations. This makes it an interesting subject to study the effects of short-termism and market logic on climate mitigation efforts. Although the Sustainable Development Goals span beyond simply climate mitigation, they have been chosen for this study because of their interesting methods and their ambitious, long-term and international scope.

4. Cases: International efforts towards climate change mitigation

4.1. International Climate Agreements

In “The Truth behind International Climate Agreements: Why They Fail and Why the Bottom-Up Model Is the Way Forward: A Game Theory Analysis” Krishna Prasad (2017) utilizes Robert Putnam's two-level game theory to separate between the national and international level when analyzing the process of trying to reach an international agreement. By identifying the participating nations' 'win-sets' – roughly speaking how much they have to win or lose on the deal that is being bargained for coming through, one can say with some certainty whether or not it is likely that the deal will be made.

As an example of a deal's success depending on each countrys win-set, Prasad uses a nuclear disarmament treaty: «If Country A was fully committed to beginning the disarmament process and living in a world free of nuclear weapons and Country B was not committed to disarmament, the outcome of the treaty would likely be minimal disarmament.» (2017, 225) In this example Country B has less to win on this deal being made as they are not really interested in a full disarmament, while Country A, being very interested in zero nuclear weapons, would have a lot to win as «any sort of disarmament treaty would begin the push to a nuclear weapon free world». This approach takes the *cost* and *benefits* the concerned nations perceive to be related to the deal, which make up their win-sets, and compare these to each other to explain and predict the outcomes of international negotiations. Because the country with the smaller win-set can use the threat of no deal in the

negotiations, «the final treaty is more likely to resemble something close to what the country with a small win-set had desired» (2017, 224-225).

Using this model, Prasad explains why the Montreal Protocol succeeded in making and going through with an international agreement, while the Kyoto Protocol did not: The top-down nature of these agreements, where the bargaining is done at the international level and then brought back home to the participants' countries for legal ratification in the national system, put their success in the hands of the countries' legislative institutions.

The preferences of the country's industries play a role in determining its win-set: If a country's industries are affected by the deal being made they «will end up playing a very active role in the ratification process and will exert special influence over it» (2017, 225). If these industries prefer a no-deal scenario over an agreement, this will shrink the win-set of the country. «An industry's preference for a no-agreement scenario can be one of the most important factors in determining not only a country's win-set but also the likelihood of international negotiations to result in a treaty.» (2017, 226)

In the case of the Montreal Protocol, Prasad assigns the United States a small win-set, although they preferred to make a deal. Europe did not have a huge interest in this at first, but later came around to the point where the US and Europe's win-sets aligned and a deal could be made, successfully reducing the emission of CFC gases, restoring the ozone layer and reducing the risk of skin cancer globally (2017, 233). When it comes to the Kyoto Protocol on the other hand, the variables were not in favour of success: The Kyoto Protocol was signed by president Clinton but never ratified, as this was not possible «due to the stance of the (US) Senate» (2017, 234).

The signing in itself did not bind the signatories to go through with anything, and when the Berlin conference of parties agreed that developing countries should have a right to develop, i.e. emit gases without restrictions, while the developed countries stood for a significant share of the already emitted greenhouse gases and therefore should be restricted, the US Senate unanimously voted to not commit to any emission cuts. Halting emissions would mean slowing down economical growth, which no parties were significantly interested in, shrinking their win-sets (2017, 235-236).

From there on, a series of misunderstandings during international negotiations, particularly between the EU and the US, combined with extensive industry lobbying in the US made it impossible for

their negotiations to reach a satisfying deal. Seeing the climate negotiations through this lens of two-level games, Prasad shows «the futility of trying to negotiate similar top-down international climate agreements» (2017, 242).

Before the Paris conference The US declared that it would not accept any legally binding commitments. This is at least in part due to the “difficulties in meshing domestic law and regulation with international legal obligations” (Wirth 2015, 516). The non-binding nature of these arrangements are both symptoms and cause of the difficulties. In 2015 the US released its *Intended Nationally Determined Contributions* (INDC) to the United Nations Framework Convention on Climate Change (UNFCCC), setting a target to reduce their emissions up to 28% below their 2005 levels in 2025. But where the European Union and Norway identify their INDC's as binding, the US INDC does not (2015, 531-532).

Prasad attributes the forming of the Paris Agreement to the failure of the Kyoto Protocol and its top-down approach in reaching an effective deal. As opposed to a top-down approach, a bottom-up approach at climate mitigation would start at levels below the global/international, for example at the subnational or national level. This entails that the methods and efforts are not identical in different regions or countries although the goal, reducing greenhouse gas emissions, are the same. Using this approach has gotten China and India to pledge to make emission cuts, and this, according to Prasad, is because the bottom-up approach does not subject the participating countries to a two-level game where the participants have to bargain for deals on both the international and national level and particularly; with the US Senate (Prasad 2017, 246).

Large lobbying contributions from fossil fuel industries has helped the Senate maintain its hardline stance against climate deals. Therefore, as the Paris Agreement demonstrates, any successful climate agreement must avoid the need for ratification by the US Senate
(2017, 246)

Under the Paris Agreement the participants pledge to cut emissions. Each country submit their plans on how the cuts will be done, and the plans are reviewed every five years. The pledges are not legally binding, thus avoiding the need for Senate ratification and a two-level game. This does however mean that in the case of the US, the agreement is an executive one, making it subject to the willingness of the sitting President (2017, 246-247).

The former United States President Obama managed to start a process for the US to meaningfully contribute to the global effort in mitigating climate change by avoiding ratification in the senate, a necessary condition for any form of success in this endeavour. When Prasad published the article, things were looking in favour of US contributions: The Clean Power Plan was released in 2015 and planned to cut emissions from the power sector by 30% under 2005 levels, with great projected health and climate benefits (2017, 248). Dependent on the approval of the supreme court, the some pieces of the plan still needed to fall in place at the time: The death of Justice Scalia had opened up a spot that, if filled by a justice appointed by President Obama would be likely to turn the supreme court in favour of the plan. Prasad optimistically states:

If President Obama's Successor gets to appoint the new justice and they are a Democrat, then again the Supreme Court will tilt in the plan's favor. The only outcome that would likely kill the plan is if a Republican administrator succeeds President Obama and the new administration appoints a new conservative justice.
(2017, 249)

In 2017 Donald Trump was elected the 45th president of The United States, promptly taking on a battle against several of former President Obamas policies, his promise to withdraw from the Paris Accord and repeal the Clean Power Plan being two of these battles. Shortly after President Trump's inauguration, republican Neil Gorsuch was confirmed as justice, replacing Justice Scalia (Tau 2017). This turn of events underline the importance of legal ratification when one wants to ensure significant policy change towards climate change mitigation. Additionally, it shows how national and regional society plays an important role in international efforts; if these are not on board, it makes meaningful and efficient action quite hard on the international level.

National sovereignty and the challenges it poses to international society and the United Nations when interests do not align is hardly a novel subject and is likely to be a topic for debate for decades to come. On a positive note, the United States' U-turn away from the Paris Accord and international collective effort on climate mitigation may have sparked a stronger interest in mitigation amongst other nations: Following President Trump's announcement, the European Union and China among others, reassured the world that they would continue their efforts with or without the US, and even call to 'step up' the transition from fossil to renewable energy (Stokols & Olson 2017).

Following the theoretical framework of international agreements as a two-level game, the statement

from the EU and China saying that they will not let the United States 'exit' stop them in their efforts was probably necessary for the international efforts to not collapse entirely, but might also serve to increase the US win-set, for example by making them 'lose face' in the international scene: Statements such as “(t)here are fears that will he confirm reports that the US will soon join Nicaragua and Syria on the small list of countries refusing to back the climate accord” (Boffey & Neslen 2017) does put the country in unusal company.

China still pledges to stay within the two degree goal without the effort of the US, but this seems unlikely. The United States is the worlds second biggest emitter of greenhouse gases, behind only China, whom admittedly pollute almost twice as much as the US (World Resources Institute, Climate Data Explorer 2019).

An obvious source to the failures of international climate agreements to reach any significant results in emission reductions are their lack of enforcement mechanisms. If a nation sees it fit to defect from an agreement, it may do so without any real worries about consequences, especially if the nation in question is a powerful economic and/or military force. This is particularly damaging when these procedures typically take years to arrange and organize, but can, essentially, be defected from with little effort.

When one compares the evidence and amount of researchers calling for immediate international collective action against climate change with the efforts actually being done and their preliminary results, it is hard not to be discouraged. Although the Paris Agreement is based on pledges and reviews over time, meaning that numbers may theoretically look more promising in the future, that is currently not the case: If all INDCs in the Paris Agreement are implemented fully, global surface temperatures are predicted to rise by around 3-4°C by the year 2100 (Young 2016).

A great deal of power is wielded by special interest groups, particularly in the industrial sector, within nations, as seen in the case of the US difficulties during attempts to make significant contributions to the Paris Agreement. Powerful actors can make efforts to 'phase out' fossil fuels very hard, as shown in coal interests efforts on opposing former President Obamas Clean Power Plan (2016, 130).

On the international level, industry lobbyists have been pushing hard for market-based mechanisms such as the cap-and-trade system to regulate emissions. In the UNFCCC, “4200 lobbyists opposed

mandatory reductions in emissions” (Slawinski et al. 2017, 270). As this thesis has argued earlier, a market-logic approach to climate mitigation has thus far not been very effective, yet it is the ideal approach for powerful economical interests with significant influence over decision-making and policy.

When examining international climate mitigation agreement efforts it is hard not to notice the political clout possessed by market actors, along with the importance of economical beneficence for a deal to be successful: Countries that have the most to lose from a given world carbon price are the ones that are most likely to defect from such an agreement, and the deal that is least binding is the deal that it is most likely no one will defect from (Bosetti et al. 2013).

In other words, the sort of international agreement that is recommended by climate researchers and defenders of intergenerational justice, is the sort of deal that it is most likely high-emitting nations such as the US will defect from, in large part due to significant domestic pressure from short-term interests.

4.2. The Millennium Development Goals

The Sustainable Development Goals (SDGs) were formally adopted by the United Nations General Assembly in 2015 as a follow-up to and continuation of the Millennium Development Goals (MDGs).

The MDGs were comprised of eight main goals which aimed to improve the welfare of human beings by setting an agenda on areas of development that was deemed particularly pressing: To eradicate extreme poverty and hunger, to achieve universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health, combat HIV/AIDS, malaria and other diseases, ensure environmental stability and to develop a global partnership for development (Preedy & Watson 2010). Urging nations to act together to reach the goals, the MDGs were a global effort to “promote global awareness, political accountability, improved metrics, social feedback, and public pressures” (Sachs 2012, 2206).

A common criticism towards the MDGs was their focus on developing nations: The goals, such as elimination of extreme poverty and hunger and combating HIV/AIDS, malaria and other diseases, were mainly targeted on poorer, less developed nations and most developed nations had no problem reaching most of the set goals. Thus the role of developed nations in reaching the MDGs were to

contribute financially and technologically to the developing nations' efforts to reach the development goals (Sachs 2012, 2207; Langford 2016, 167-170).

Further criticisms involve the “reductionist” nature of the goals in which complex issues were addressed in simplified ways with “concise time-bound and outcome-based targets”, a lack of indicators measuring the progress towards the goals creating “perverse incentives for implementation” (Langford 2016, 169) and the closed nature in which the MDGs were conceived:

Based on the Millenium Declaration (loosely at times) and developed by a number of UN insiders, the MDGs were endorsed by UN Secretary-General Kofi Annan with no public discussion. This fast-track process irked not only civil society but also member states.
(2016, 170)

These criticisms of an operation where goals mostly focused on developing nations created in a top-down process, the focus on foreign aid and the lack of focus on development in well-off countries served to decrease the legitimacy of the MDGs somewhat. Although many of the goals of the MDGs had been improved by the 2015 deadline, certain positive long term trends like economic growth, clean water, education and health may imply that these nations are doing progress with increasing welfare irregardless of UN efforts (Easterly 2015). For example, it may be argued that some improvements would have taken place with or without the MDGs, such as economic growth in China alone cutting poverty in developing countries in half between 1990-2010 (Sachs 2012).

On a positive note, evidence suggests that the MDGs were “most effective in accelerating progress in traditionally marginalized policy areas such as sanitation and maternal mortality” (Langford 2016, 169) and “have stimulated interest and increased funding for programmes aimed at reduction of maternal and child mortality and the burden of HIV/AIDS, tuberculosis, and malaria” (Victoria et al. 2011).

Nonetheless, there is a widespread feeling among policy makers and civil society that progress against poverty, hunger and disease is notable; that the MDGs have played an important part in securing that progress; and that globally agreed goals to fight poverty should continue beyond 2015.
(Sachs 2012, 2206).

The MDGs set an agenda of international cooperation towards development and welfare growth in the countries that needed it the most. Although it is difficult to ascertain to which degree improvement towards the goals were the work of the MDGs, the practice of making and promoting them were valued to such a degree that international society decided to continue the work after the 2015 deadline through the Sustainable Development Goals.

4.3. The Sustainable Development Goals

In addition to continue pursuing the MDGs that did not meet their deadline, the SDGs take the agenda further by expanding its scope, areas of and understanding of development.

The SDGs are comprised of 17 different goals with 169 'subgoals' or targets accompanied by around 230 indicators to be used for measuring progress towards the goals, of which the deadline is set to the year 2030. Building and expanding on the MDGs, the Sustainable Development Goals have kept the exteriorly simplistic presentation of their predecessors, but nearly doubled the amount of goals. Every goal can be assorted to their respective economical, social or environmental system following the systems approach to sustainability, and all have interconnected relationships (Barbier & Burgess 2017; Sachs 2012):

For example, the fulfilling of criteria within SDG 4, *quality education*, a goal focused on the social system, can be thought to be connected to the economic system by improving the degree to which individuals can participate and contribute in the economic system, represented in SDG 8, *decent work and economic growth*. Simultaneously, education's well known negative effects on fertility is likely to provide a reduction on birth rates and thus the impact of a growing population on the environment, aiding the progress towards SDG 13 – *climate action* (UN 2019).

Although based on and aesthetically similar to the MDGs, the SDGs differ from them in many areas, and many of the differences are likely adaptations made in response to the criticisms made against the MDGs, as well as a response to the lessons learned in the previous process. For example, in the MDGs only one goal was directed at the environment; goal 7 - to ensure environmental stability.

Further adaptations seemingly respond to the criticisms of the MDGs' focus on developing nations: As shown earlier, this provoked many and likely served to delegitimize the project to some degree, largely in due to the insinuation that developed countries did not have issues worthy of

improvement. With their 17 goals, the SDGs set up room for improvement in several areas for all nations, urging developed nations as well as developing to make improvements within their regions, and holding them accountable for more than foreign aid donations. A third way the SDGs differ from the MDGs is the time spent creating them: Where the MDGs were quickly formulated 'behind closed doors' without much analysis, the SDGs were the results of years of planning, discussion and analyzation (Brito 2012).

The process of drafting the SDGs was, likely due to the criticisms concerning the lack of transparency and inclusion in the MDG drafting processes, significantly more inclusive:

Throughout 2012 and 2013, the United Nations facilitated what seemed like the first exercise in global participatory democracy, organizing fifty-plus country consultations, multiple global thematic consultations, and a worldwide online citizen survey – all of which were accompanied by numerous parallel NGO, expert, and state initiatives.

(Langford 2016, 170)

Additionally, the open nature of the process allowed for interested actors to engage at different points and stages of the drafting. This change in transparency and inclusiveness from the previous effort on international mobilization towards global development likely served to boost legitimacy and perception of accountability in respect to the participating nations – as so many have taken part in formulating the goals, surely this would increase morale and incentives for trying to reach them?

As the formulation of the goals was done, not everyone would agree that the diversity in drafting participants was in the best interest of sustainable development or cohesion: A diversity in participants also secured a diversity in interests seeking influence on the global framework for development. All 193 member countries of the UN pledged to make efforts to reach the goals that they had contributed to the formulation of, and this in itself is argued to be a distinct weakness to the SDGs: Because of the highly participatory nature of the drafting process, a diversity of interests characterize the final goals, their targets and indicators. This serves as a source of criticism towards the speculated actual effectiveness of the SDGs. William Easterly in this regard asks a fitting question: “How many effective actions are going to be possible after a process in which any leader in the world – from Vladimir Putin to Bashar al-Assad to Kim Jong-un – could veto any action he or she didn't like?” (Easterly 2015, 323).

Truly, the SDGs scope and size bear signs of both the diversity of different interests engaged in the highly participatory drafting process, as well as being a response to the criticisms of the MDGs' reductionist framework and exclusive conception. At the end of the process, “almost all countries decried the number of goals and targets, yet none expressed willingness to trade off its own favored goals and targets” (Langford 2016, 171).

The expanse of the 'we' in the SDGs have, it seems, come at the expense of coherency and decisiveness in the goals, earning them characterizations such as 'bloated' or 'watered down'. These are not uncommon adjectives in the description of UN efforts however, as their methods of diplomacy, bargaining and compromise on the international level often involve efforts to include all responsible and affected actors. This 'watered down' state of the rhetoric in the SDGs is thus a result of the inclusive and cooperative way they have been created. Perhaps this is at the cost of efficiency, but how effective could they aspire to be if all the nations that are unwilling to trade off their favored goals and targets simply defected from the agreement instead? It is quite likely that if this were to be the case, international efforts to coordinate development would be even less effective.

The speculated lack of efficiency of the SDGs are however one of their biggest criticisms, and build on the more general criticisms of the UN and their issues with national sovereignty as an international organization in whole. As posited by Easterly, the ability of nations or leaders to veto disliked actions or simply defect from agreements with little or no repercussions remain a major weakness of the UN: There simply are not any sufficient enforcement mechanisms, and so the cost of defecting from the deal is minor (Madeley 2015, 33). However, the UN arguably deals with this weakness in an optimal way – the fact that there are no costs from defecting are likely also an important reason to why there are so many willing participants to the process. Because there are not any perceived huge risks or costs connected with participating, it might send a message that 'it can't hurt' to be a part of the process.

In addition to the quite substantial criticism of a lack in operationalization of the indicators and how to measure sustainability and progress towards the goal in whole (Singh et al. 2012; Hák et al. 2016; Langford 2016), another, more rare criticism of the SDGs is that the focus in the framework is still that of economic growth, and that they are built on an assumption that it can go on as usual:

As I have shown earlier in this thesis, economic growth is at the moment closely connected to GHG emissions, and that an emission reduction is therefore believed likely to be connected to a certain

decline in growth. It is therefore a contradiction, as John Madeley points out, “between relying on economic growth to end poverty while at the same time taking 'urgent action to combat climate change’” (Madeley 2015, 33).

Granted, the SDG framework and the systems approach does in theory allow for the occurrence of economic growth and climate change mitigation at the same time. This is partly what is being criticized by Madeley, and should be seen in connection to the reasons for the 'bloating' of the SDGs. But another critical point raised by this author is the failure to feature transnational corporations (TNCs) in the framework, which he deems to be “a testimony to the power, not just over the economy, but over and possibly within the UN and world governments” (2015, 33). These observations and further concerns on the power of market ideals over policy seem a major challenge to the success of the SDGs, indeed (Sachs 2012, 2211).

All in all, the UN SDGs bear many characteristics that are shaped by the political and economical environment in which it is based. The legitimacy of its activities is arguably dependant on the attendance of as many nations as possible, and the absence of any real enforcement options render the organization reliant on an arsenal of 'soft power', negotiation, cooperation and compromise. And this, however inefficient, is arguably preferable to an international society where no such activities take place.

In respect to the research question, the effects on the UN SDGs on climate change mitigation are uncertain at best. The SDGs build on a realization that issues of domestic nature in many cases have international consequences, require institutional reform, and that steps to mend this must be taken on the international level. The UN SDGs represent “a form of *institutional cosmopolitanism*” (Langford 2016, 172), and is an international framework for a cooperative effort to plan and work towards these reforms. As I have shown there are good reasons to doubt the effectiveness of these efforts and that all goals will be reached by 2030, but as I have also argued, a commonly agreed to and developed framework on sustainable development is more effective than none at all.

The SDGs are both similar and different to the MDGs. In many ways the SDGs seem to have adapted to the criticisms and shortcomings of the MDGs, but they are also vastly more ambitious, likely due to the high rate of participation. Looking back, it is noted that the MDGs were quite successful at putting previously neglected policy areas on the agenda, stimulating funding and interest, ultimately improving many lives during their period.

Perhaps is awareness-building and public relations-efforts for certain policy choices on an international level the biggest contribution made by these goals, as other contributions are difficult to measure and easy to contest. By allowing all member nations to participate and taking on a diverse range of interests in building their framework, the UN manages to spread their agenda and message, at least to some degree, to all corners of the world, popularizing otherwise perhaps unknown policy alternatives.

The focus on sustainability through the systems approach and SDGs is at the surface a relatively simple and coherent framework for development towards a more sustainable mode of operations on all levels of government. Under the surface targets and indicators specify how progress towards the goals are measured, leaving the nations free to consider their approaches and acceptable trade-offs.

Although all goals are meant for everyone, nations prioritize different goals. A developed nation such as Norway for example, will not need to do much work towards getting clean water or food for everyone, and is likely to focus more on climate action. This arguably serves to legitimize the agenda further because all countries have areas where there are improvements worth pursuing.

To further build on this notion, consider the following: When doing a multi-dimensional analysis by aggregating sustainability indexes and comparing the scores of different nations on the different measures of sustainability, Campagnolo et al. (2018) finds that while European countries score highest on the sustainability index, rich countries are outperformed by developing countries, particularly nations in Sub-Saharan Africa on the environmental measures. This is of course due to the huge difference in industrialization between the two, but it does present a grounds for comparison where not only developing countries outperform developed ones, but where having a high degree of environmental integrity is treated as a value, a 'good' that does not account for income or economic efficiency.

Any incentive to increase efforts and results in the environmental system is welcome, and if the competition of outperforming developing countries on the environmental sustainability index in any way creates such an incentive, it is a means to an end. Additionally, to the degree that nations care about their or others score in this framework, the practice of submitting and viewing results on the progress towards the SDGs provides a platform for international cooperation and accountability that we might have been without if it was not for them.

5. Analysis

Energy derived from the combustion of fossil fuels is the backbone of our economic activity. It is the source to a spectacular growth and progress that have improved the quality of life and welfare for millions, if not billions of people across the world. There is no doubt that we have made ourselves dependent on this level of energy and productivity, and that giving up on this entirely today, would necessitate a major change to the way we develop, provide ourselves a high level of comfort and our very way of life. For many of us, this is simply not something that we are willing to do.

And yet, the evidence tells us that this is exactly what we need to if we are to ensure that our successors may enjoy benefits similar to ours. The estimates given to where the surface temperature of the earth will lie a hundred years from now vary, but what they all have in common is that they find themselves way above the 2°C goal set by the Paris Agreement. This limit is not an arbitrary one – a 2°C increase in temperature compared to pre-industrial levels is accompanied by countless unwanted and disastrous reactions that will change global society and have negative economic consequences way beyond those connected with climate change mitigation, as argued by Nicholas Stern.

So why are we not taking this in? Why do we continue the hazardous activity even though we know that collectively, one commercial plane trip at a time, we are degrading the environment and loading the atmosphere with greenhouse gases that without the technology to remove it, will take decades or centuries to be naturally disposed of? This is the research question of this thesis, and to answer it, we have explored the effects of short-termism – the priority given to present net benefits at the cost of future ones, on international climate mitigation efforts, through the lenses of market logic, sustainable development and intergenerational justice.

International attempts in the UN to draft and sign a binding, effective and lasting agreement, the 'gold standard' in international legislation has thus far not been successful. There have been several attempts at an agreement with the same kind of success as the Montreal Protocol, but in the case of agreements attempting to put a cap on GHG emissions to realistically thwart, no such agreement has been realized as of yet. The Paris Agreement was able to spark some hope in optimistic environmentalist hearts, but this soon vanished after the inauguration of President Donald Trump. The Paris Agreement is not history yet, as other nations pledge to keep on according to plan, but it

is not going to be an easy task to complete without the cooperation of the second biggest emitter in the world. If President Trump gets re-elected in the 2020 elections, there is no reason to assume that the US will not pull out of the agreement.

A huge concern found in several of the sources reviewed is that of the lack of an international legislative institution to match the global challenge of climate change, and the weakness, unreliability and short-term orientation of regulations. In most of the international efforts towards climate mitigation, defection has no immediate negative consequences for the defector. The international level has no means for coercion, and so it must base its business on cooperation, compromise and bargaining.

When reviewing the empirical evidence on international climate mitigation agreements, several features from the theory on short-term interests and market logics dominance in climate issues can be identified as contributors to the absence of effective mitigation efforts: The cap-and-trade-systems built on market logic does not contribute to any significant emission reductions and eventually falls flat due to a US defection on grounds of domestic resistance in the senate when the agreement suggests that developing countries should get their 'fair share' of emission-spurred economical growth. Such an arrangement was deemed unfair by the US, and as the costs of ratification was regarded as way higher than the benefits, defection became the answer.

The UN, which seems to adapt to the political environment by mixing their ideals of sustainable development with market logic in a sometimes paradoxical way, responded in cooperation with former President Obama by creating a new model in the Paris Agreement, where a bottom-up approach to mitigation was to enable the US to commit to emission reductions without the need for ratification in the senate that would inevitably be shut down, presumably due to the pressure from market and industry actors with dominant short-term interests.

In many ways the approach in which international climate agreements are negotiated are shaped by and for short-term interests and market logic. The agreements themselves often base their very practices on markets and bargaining, while the regulatory weakness in the agreements incentivise defection and disobedience. As the consequences of defection are slim to none, the benefits of defecting are far too big to ignore. An important point here is that the short-term interests themselves shape the weak coercive capabilities that allow them to continue the behavior. As the theory suggests, the mechanisms are self-enforcing in the case of international climate agreement

drafting efforts: Powerful short-term interests push for market logic in mitigation efforts, which then encourage short-term focused behavior, which in turn results in the absence of effective climate mitigation.

The two-level games being played on the international level are in themselves the very same bargaining games that Stern tell us we do not have time for, but since the interests driving them are not particularly concerned with the discounted costs of the future, it seems that his pleas fell on deaf ears.

International climate agreements are failing to efficiently mitigate climate change, and this is in large part due to the dominance of short-term interests enforcing market logic on the agreements and therefore mitigation efforts, effectively reaping the benefits of climate change-driven profits while imposing the costs on future generations. By a presentist viewpoint this may be justifiable depending on the level of destruction that will come as a result, but by any of the other moral schools of thought presented in this thesis, it is not.

The UN SDGs is an interesting case for this research question. Not only is it a large, global attempt at guiding policy internationally, but its drafting process was highly open and transparent. They built on the success of the MDGs, and learned from their mistakes. While under the same non-coercive limitations as the international climate agreements, the SDGs differ from these in that they are able to set goals that arguably promote other values as well as economic growth on the agenda. One of the many compromises here is the combination of economic growth and environmental and social development in the middle ground that is sustainable development.

Like the international climate agreements, the SDGs bear signs of short-term interest dominance and market logic: The participation and progress towards the goals are essentially voluntary – failure to meet even a single one has no penal consequences, save maybe a bad reputation on the international scene. The fact that so many interests were included in the drafting process created a huge set of goals, targets and indicators, but also ensured that anything that could be interpreted as controversial or radical was left out.

In the case of the SDGs there is far less evidence to the effects of short-term interests than in the case of international agreements, but some clues are spotted in the focus on economic growth even though this is thought to be in conflict with climate change action, implying that a trade-off has to

be made between the economic and environmental system. It is then up to reason what will be prioritized in such a trade-off, and judging by history and the arguments made on costs, benefits and short-termism in this thesis, the winner of that trade-off is likely to be economical growth.

I have however argued that the the very format of the SDGs are shaped by the challenges posed by short-term-interest dominance, in their open, pluralistic and voluntary nature. Knowing that there are no available coercive measures, and that a hard line on certain values were likely to encourage defection or simply disregard of the agenda, the UN aim to reach as many as possible with the message of sustainable development by opening the process up for bargaining in hopes to spark interests and make a difference through PR-campaigns and the spread of knowledge on alternatives to pure economical growth. The evidence points towards such an effect from the MDGs; while successfully reaching many goals in many nations, the main success of the MDGs seem to have been awareness-building and attention to otherwise neglected policy areas. While some of the SDGs are focused on basic human needs such as food, clean water and health care, others are aimed at improvements that are thought to improve welfare in more indirect ways: Sustainable cities and communities, reduced inequalities, decent work and economic growth and life below water to name a few. By including all nations in the drafting process and defining measureable goal indicators the SDGs promote a common ownership of the goals, as well as a notion of a competition: Who will end up with the best score on the measures on industry, innovation and infrastructure? Who will be the best at affordable and clean energy? This is of course both highly speculative and optimistic, but the PR element is there and does make the SDGs a powerful contributor to the discourse on policy alternatives and values that can be counted in other measures than economical profit.

Now to the question of the viability of Institutions For Future Generations in climate mitigation: The strength of these ideas lie in the conceptualization of future interests, and that by accepting that such a thing exists, we also necesarilly have to accept that we are acting against them when using more than our fair share of the finite resources available to us: The resource of the environment in particular, which atmosphere we fill up with gases that cause global warming, which will degrade the environment to unacceptable levels if we do not stop or otherwise mend the damage.

The strongest arguments for the institutionalization of the protection of future generations from the short-term interests of the present, strikes this author not as the moral sentiments on the present generations unfair and greedy exploitation of resources to the disadvantage of future generations, but rather the fact that our blind favorization of the short-term is about to permantly damage our

planet. It has been thoroughly argued that international society is failing the task of mitigating climate change, in large part due to self-enforcing short-termist mechanisms and incentives in our political and economical system. IFFGs, such as reserved seats in parliament for F-representatives or pension funds for the future both seem like viable alternatives to turn the game slightly less in favor of short-term interests. A big obstacle to this is of course the ratification of these institutions, as well as the fact that most of these institutions are designed for the national level, thus not really responding to the international challenge of climate change.

The literature calling for legal institutional response to climate change all point at the international level as the place where the efforts need to happen, but when we see the difficulties encountered when drafting and signing a legal document to control the GHG emissions, it is extremely unlikely that the same nations that oppose these proposals would agree to give away some of their sovereignty to an international institution for future generations.

Because nations are more efficient at making binding legislation than the international community, and climate mitigation is a problem that requires urgent action, the responsibility is in large on the shoulders of the nations of the world. And because in general, the countries that emit the most are also the geopolitically most powerful ones, a lot rests on these nations and their susceptibility to short-term interests.

6. Conclusion

Short-term interests and market logic dominate the political and economical systems. Compared to other value systems such as sustainable development or measures of justice and rights, short-termism seems to trump the former in questions on climate change mitigation. Short-termism encourages the formation of mitigation systems based on market logic on the arena of international climate agreements, this enforces short-term interests dominance by creating more incentives for the preference of present benefits.

When it comes to climate change mitigation, we are failing to account for the long term, and are imposing costs on future generations for the benefit of the present. In the UN, arrangements and agreements are very affected by the influence of these interests, and the prevalence of bargaining games and weak regulations are testaments to this. It seems as if the market actors are waiting for mitigation to become profitable, or for the consequences of climate change to become more obvious before they will decide to step on the brakes.

Not all is lost, though. The SDGs have successfully included all UN member nations in the drafting and formation of a global framework for sustainable development, which although defection from is unsanctionable, are likely to have some formative effect on ideals of growth and development. Additionally, public pressures on climate change are increasing. Protests and school strikes have put more pressure on government for policy change than ever before. Maybe we will be able to leave our successors a world that is as good as, or better than the one we have lived in. This remains to be seen.

7. Literature

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